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[Extracted from the American Journal of the Medical Sciences for October, 1872.]

O V A R I O T O M Y

BY

ENUCLEATION, WITHOUT CLAMP, LIGATURE, OR CAUTERY.

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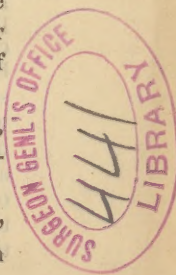
IN proposing a new method of procedure in so important an operation as ovariectomy, it is quite becoming, at least, to state the facts upon which the proposition rests, and leave others to draw their own conclusions.

During an active surgical practice of twenty-five years, I have been in the constant habit of enucleating solid and cystic tumours from all the important surgical regions, following in this the example and teaching of surgeons generally. We have all felt a safety when attempting to remove these morbid growths, if we could find a well-marked boundary where the morbid could be separated from the healthy tissue, by the finger or handle of the scalpel; indeed, but for expectation of finding a well-defined boundary to be thus broken up, the removal of many of these tumours would never be attempted. Surgeons have always, so far as I know, been in the habit of *enucleating* all other tumours, not inextricably joined to the surrounding tissues, so that, upon a little reflection, it will appear strange that it should not earlier have been tried in ovariectomy, rather than that it should now be proposed and urged upon the profession for trial.

No surgeon in the world was ever more surprised at what he had done than myself, when I found that I had removed a large ovarian tumour without ligating a single vessel, and without any hemorrhage worthy of notice.

My first observation and experience in this procedure occurred in April, 1869, and the case was reported in detail in the *Buffalo Medical and Surgical Journal* for June of the same year.

I was invited to remove an immense ovarian tumour of two years' growth, which had been repeatedly tapped, but the contents at length



proved too thick to be drawn through the largest sized canula, and, distress becoming too great for endurance, any operation which would end it, whatever might be the result, was gladly accepted. The tumour was multilocular, weighing, as near as could be determined, one hundred pounds. It was attached throughout its entire circumference to the omentum, intestines, walls of the abdomen, and all other parts with which it came in contact. These attachments were not so firm but that they could be broken up, and with great care the tumour was separated from the surrounding parts until the pedicle was reached. The process of enucleation had been carried on so successfully and so extensively, that encouragement was afforded for continued trial. The pedicle was large, and extended over a wide surface, but by careful and patient effort, it was separated from its entire attachment to the tumour, and the immense growth removed without the ligation of a single vessel. The terminal branches of the vessels of the pedicle gave out no more blood than issued from the vessels of the attachments elsewhere, and there appeared no more occasion for ligature here than elsewhere. All hemorrhage soon ceased, and the incision was closed by interrupted suture. The success of this procedure was complete, and the patient continued to improve, declaring herself quite well at the end of about two weeks, without having had an unfavourable symptom. She now commenced to lose her relish for food, grew weak and desponding, and died from exhaustion on the twenty-first day after the operation. The fatal termination detracted nothing from the success of this mode of treating the pedicle; indeed, so remarkable was the size and attachment of the tumour, that any attempt at recovery was surprising, and yet the feeble, emaciated, exhausted patient continued to live long enough to show that this manner of treating the pedicle was, at least in her case, unobjectionable.

The second opportunity I had of testing the feasibility and safety of the plan, was in the case of a German woman, aged 66, in the Buffalo General Hospital, during December of the same year. She was of feeble and delicate appearance, and considerably emaciated. The operation was made in presence of the students of the Buffalo Medical College, and many physicians, and I was assisted by my colleagues, both of the College Faculty and Hospital Staff. This tumour was found also attached to the walls of the abdomen and omentum, but the adhesions were readily broken up. The cysts were emptied to some extent, and the tumour raised from the cavity of the abdomen. On reaching the pedicle it was found large, its principal arteries throbbing distinctly. Commencing at the base of the pedicle, the fingers underneath all, it was gently separated or torn from the cyst, following out the vessels to their final termination, as they extended over the walls of the tumour. Upon removal it was found to weigh seventy-one pounds, and to be composed of numerous cysts. The bands of vessels composing the pedicle, when separated from the tumour, contracted so as to corrugate the vessels, and leave the pedicle appearing almost as if divided by a knife. To the surprise of my associates, little hemorrhage followed the separation, less than attended separation of the bands of attachment elsewhere. She recovered from the anæsthetic, received the congratulations of her friends, and seemed very comfortable. By misunderstanding of attendants she received, after four hours, a second subcutaneous injection of one-half grain of morphia, and soon appeared as if narcotized. From this she could not be aroused, and she died eighteen hours after the operation.

Post-mortem examination showed no hemorrhage, and we inferred that death was from either an overdose of morphia, or shock, or both combined.

These and some other similar cases were soon after published in the *Buffalo Medical and Surgical Journal* in connection with remarks as to the safety and general advantages of this method of operation, and since then other surgeons have added their experience to my own, so that I am no longer confined to personal observation alone, repeated trial having made it *certain* that the ovarian tumour can be removed without the ligation of vessels, thus leaving no pedicle to treat.

It is well known that all the difficulties and many of the dangers of this operation have depended upon the pedicle, its length, size of vessels, modes of treatment, etc. etc., so that a proposition to avoid all these, all clamp, cautery, and ligature, and really have no pedicle, may naturally appear startling to surgeons who have tied large vessels in the operation, or have witnessed the fearful hemorrhage which sometimes takes place from slipping of clamp or ligature; a moment's reflection will, however, remove the surprise. The ovarian tumour is composed of a firm, dense, fibrous cyst, containing fluid of varied colour and composition. It may, and it may not, have a solid portion, but usually it does have more or less of the latter, and it is often divided into numerous smaller cysts—cysts within cysts. Externally it has this dense, firm covering, and the vessels which sustain the growth enter it, if at all, only of capillary size. The attachment of the pedicle to the cyst is much more easily broken than any one would suspect who has not attempted its separation in the manner described. The same efforts which are made to separate the adhesions elsewhere, if extended to the pedicle, will be found equally successful. The finger should be introduced under the central portion of the pedicle, fully down upon the cyst, and by a gentle elevation followed out along the fasciculi of vessels as they extend over the walls of the tumour; nothing can be more easy of execution, or more readily accomplished. Other similar cases might be related, but I choose to refer to the experience of others in confirmation of my proposition, rather than multiply cases of my own. Prof. Thomas, in his recent work on Diseases of Women, states:—

“I have resorted to this method advised by Dr. Miner, of Buffalo, N.Y., three times, with good results, in cases which would have proved unmanageable by other means. . . . It appears to me to be the most valuable of all the contributions to ovariectomy which have emanated from this country.”

Richard H. Meade, Esq., Consulting Surgeon to the Bradford Infirmary, England, relates a case in which he performed ovariectomy, and observes:—

“When I commenced the above operation I had no idea of imitating his [Dr. Miner's] proceeding, but when the tumour (to my horror at the time) enucleated itself, and there appeared to be no bleeding from the pedicle, I determined to follow his example, and leave the torn surface unsecured, thinking that the risk from hemorrhage was less than that from inflammation from the presence of a foreign body in the peritoneal cavity. My case turned out successfully,

and I think I should venture to repeat the proceeding in some special cases."—*Brit. Med. Journ.*, November 26, 1870, p. 577.

Thus it will be seen that the experience of other surgeons was early found to agree with my own, and my convictions of its safety and propriety strengthened. More recent observations have confirmed and made it, I think, *certain* that ovarian tumours can be removed as other cystic tumours are removed, by *enucleation*, that is, by separation from the vessels and tissues by which they are surrounded and nourished, that it can be done without hemorrhage, and without ligation of vessels, thus avoiding many of the dangers attending the operation, such as secondary hemorrhage, as where large vessels are ligated or secured by the clamp; the *debris* of burnt tissue, as a source of peritoneal inflammation, where the cautery has been employed; the decomposition of parts strangulated beyond the ligation, when all is returned into the abdominal cavity, or the keeping open of the incision if the pedicle is placed in the lower angle of the wound; in a word, avoiding all the difficulties and dangers attending the treatment of the pedicle.

At the risk of being tiresome to my readers, I will refer to some of the particulars of my last operation, as it illustrates what may be hoped for in this method of removing these growths.

My friend Dr. S. F. Mixer, of Buffalo, who had already become familiar with this plan of operation in ovariectomy, invited me to remove an ovarian tumour in May last, from a young lady 22 years old, of nervous, delicate temperament. The growth had been noticed for only about six months; consequently was rapid in formation, and exactly the kind to test, so far as any one case could test, the safety of enucleation. After the patient was fully under the influence of chloroform, an incision about four inches in length was made, exposing the tumour. The body was found directly under the incision, and was attached to the walls of the abdomen for a diameter of four or five inches. This being separated, a large trocar and canula were introduced, through which the contents of the cyst escaped, and the tumour was drawn through the opening and raised from the cavity of the abdomen. The pedicle was now carefully separated from the cyst, beginning at its central portion and peeling the vessels and tissues by which they were surrounded from the walls of the tumour. This was readily effected, and the tumour, weighing eighteen pounds, removed. Two small vessels bled a little, and torsion was made with artery forceps. No further hemorrhage, indeed no hemorrhage worthy of mention, attended the separation, which would not have ceased spontaneously in a few minutes. The abdomen was sponged of all blood, serum, and such contents of the cyst as had escaped, and the wound closed by interrupted silver suture, supported by adhesive strips passing around the body, and the patient placed in bed. She vomited that night several times, apparently from the effects of the chloroform, which, with the anxieties of the operation, increased the pulse to 120 per minute. After this subsided, or after the first forty-eight hours, the patient had no further symptom of disease, pulse became natural; appetite good, expression cheerful; no pain, tenderness, swelling or suppuration followed. The patient was not made ill by the operation.

Whoever had seen ovariectomy performed by any of the other methods, and had then witnessed the ease, rapidity, absence of hemorrhage, and completeness of this surgical procedure, could not but be impressed with the safety and superiority of this over any other method before proposed.

It will be asked, can all ovarian tumours be removed by this method? Perhaps it is not possible to remove all ovarian tumours by any plan of procedure. Certain it is, that surgeons have been in the habit of making what they term exploratory incisions, and in some cases abandoning the undertaking. These abandoned cases were formerly very numerous, but the discovery that adhesions did not make it impracticable to proceed reduced the number very greatly. Many of the cases formerly abandoned could, beyond doubt, have been removed by enucleation, and similar ones are now removed, not only by this but by all other methods of operation. The "exploratory incision," so called, will remain, as expressive of a condition of things not anticipated by the surgeon, so long as it remains impossible to make in all cases positive and definite diagnosis; but it is believed that all ovarian tumours capable of removal can be removed by the method proposed, with advantages so manifestly superior as to commend it for trial before resorting to any other plan.

It may here be remarked that the enucleation of the cyst does not in the least interfere with the subsequent adoption of any method found necessary for the arrest of hemorrhage; but careful study of the best methods of enucleation will prevent resort to any other expedient. The methods of enucleation are to be studied, but thus far no difficulty has been encountered in separating the pedicle from the cyst; it is astonishing how readily it is accomplished. The finger is easily inserted fully down upon the cyst, at the base of the pedicle, and the strands or bundles traced out by a gentle lifting process to their final termination upon the sides or walls of the tumour. If any vessel, larger or less corrugated than the rest, should afford troublesome hemorrhage after a few minutes' exposure, it should be twisted after the usual method of torsion for arrest of hemorrhage, or subjected to the action of Dr. Speir's artery constrictor should it prove to act more efficiently than torsion, or if, as might possibly occur, from hasty or imperfect manipulation in separating the pedicle, a larger vessel should be ruptured, a small metal ligature may be applied, and, thus supplemented, *all ovarian tumours capable of removal can be, and I am convinced should be, removed by enucleation.*

